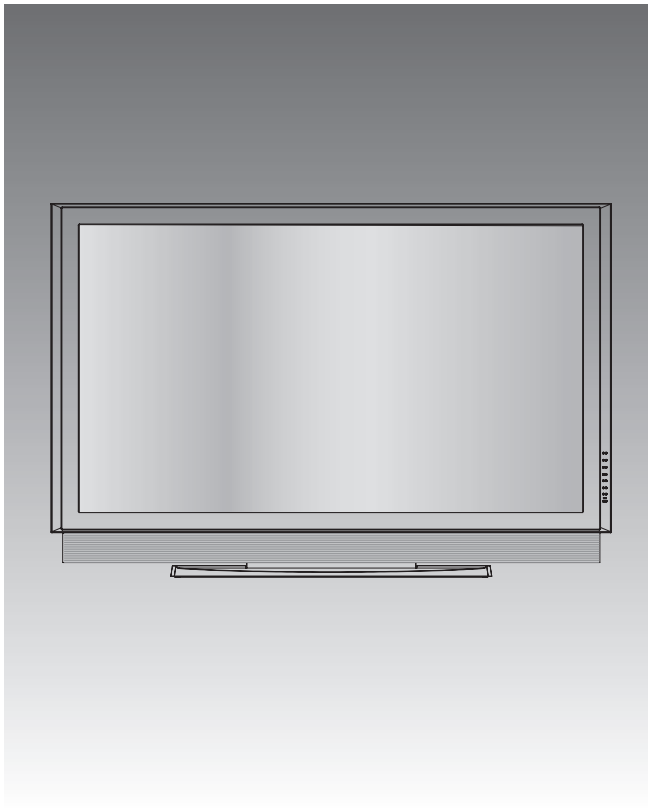
SAMSUNG

PLASMA DISPLAY TV

Chassis : D68A(P)Europe 50"
Model : PS50P4HX/XEC

SERVICE Manual

PLASMA DISPLAY TV



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Printed in Korea
AA82-01417A

1. Specifications

MODEL		PS-50P4H
Screen Size		127 Cm / 50 Inches (16:9)
Dimensions	Display	1257(W) x 84(D) x 740(H)mm
	Remote Control	59(W) x 22(D) x 209(H)mm
Weight	Display	44 Kg
	Remote Control	164g (Including batteries)
Voltage		AC 110V~, 240V/50,60Hz
Power Consumption		460 W
Number of Pixels		1366(H) X 768(V)
ANTENNA input		VHF, UHF (75Ω unbalanced)
VIDEO Input		Ext.1 Ext.2 Ext.3 AV1, AV2, AV3(Side) S-VIDEO1, S-VIDEO2(Side) COMPONENT1 (480i/480p/576i/576p/720p/1080i) COMPONENT2 (480i/480p/576i/576p/720p/1080i) PC (MINI D-SUB 15P) DVI-D
AUDIO Intput		AV1 AV2 / S-VIDEO1 AV3(Side) / S-VIDEO2(Side) COMPONENT1, COMPONENT2 PC DVI-D
Monitor Output		VIDEO, AUDIO(L/R)
Speaker Output		15W + 15W (8Ω)
Accessory		Remote Control/AAA Batteries, Power Cord Antenna Cable, Owner's Instructions

MEMO

2. Alignment and Adjustments

2-1 Service Mode

2-1-1 SERVICE MODE Entry Method (General Transmitter)

■ Using the Customer Remote

1. Turn the power off and set to stand-by mode.
2. Press the remote bottons in this order; INFO-MENU-MUTE-POWER ON to turn the set on.
3. The set turns on and enters service mode.

2-1-2 Initial SERVICE MODE DISPLAY State

2-1-2(A) OSD DISPLAY

Factory Mode **Current Input Mode**

01. Picture Improvement ▶
02. Initial Setting ▶
03. PIP/Test Pattern ▶
04. Option-1 ▶
05. Option-2 ▶
06. Reset ▶

Release : 2004-04-06-17:00
Version : T_NPL50PEU-0010

☞ Indicates selected input mode
☞ Picture Adjustment
☞ Setting the Initial Values
☞ Setting the Special Features
☞ Options-1 : Particular Product Options
☞ Options-2 : PDP Properties Options
☞ Initializing after saving the adjustments
☞ Software Version Information

2-1-2(B) Button Operations in SERVICE MODE

Menu	Displays all menus
UP/DOWN	Cursor moves to select items
LEFT/RIGHT	To increase and decrease the data of the selected items
↵ (ENTER)	Confirm your choice(Store OR Enter)
SOURCE button	Change input source

♣ **While in Tuner mode, the direct access buttons can be used to select and change channels.**

2-2 WHITE Balance Coordinates

2-2-1 PS-50P4H White Balance Adjustment

1. W/B Adjustment is required for the following six modes :
   DVI → Component(1080i) → Component(720p) → PC → VIDEO (Video port) → VIDEO (Graphic port)
2. Adjustment Method (Signal equipment : MSPG-925LTH, Measurement equipment : CA210)

■ MSPG-925LTH
Equipment that outputs analog and digital signals simultaneously
(Analog / Digital signal output / TV signal output (S-Video included) / HDTV signal output)
-. Digital Serial : TMDS (DVI24, SiI160) + DVI-I (Analog, Digital)
-. Monitor Signal (Analog): R, G, B, HS, VS, CS
-. TV Signal (CVBS) : NTSC M, NTSC J (7.5 IRE On/Off) (BNC or RCA), PAL B, D, G, H, I, PAL M, Nc
-. D-TV Signal (1080i, 720p, 480p)
♣ MSPG-925 is used to adjust the W/B.

■ CA210 : Color Analyzers adjusting brightness, chromaticity and etc.
-. R.G.B monochrome correction, brightness and gamma character adjustment
-. White Balance and flickering measurement

(a) DVI
1) Input Toshiba pattern (#16) at 720p resolution.

2) Select 02. Picture Improvement -> 01. White Balance.
3) Adjust items 07(Sub Contrast) & 08(Sub Brightness).
4) Adjust Items 01-03 (RGB Drives) and Items 04-06 (RGB Cutoffs).

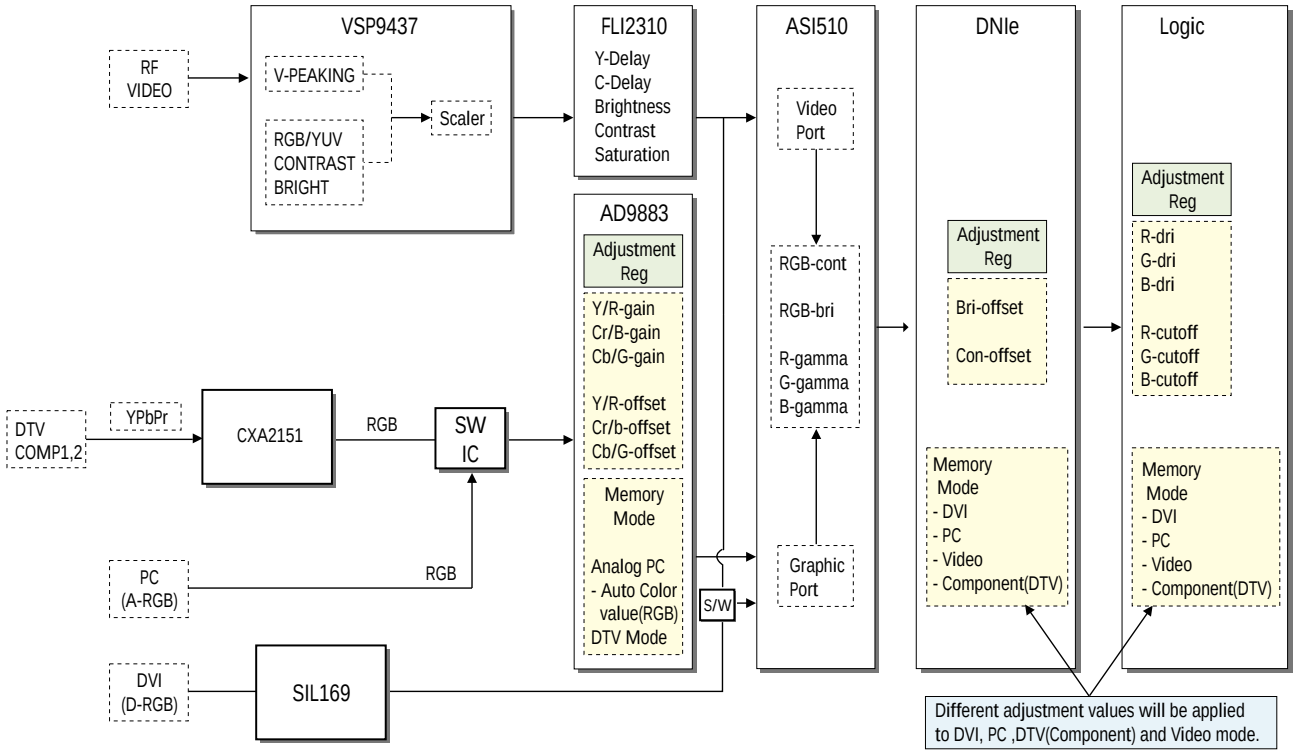
(b) Component
1) Input Toshiba Pattern (#16) at 1080i resolution.
2) Select 01. Picture Improvement > 01. White Balance.
3) Adjust White Balance by selecting and adjusting Items 01. - 08. as performed in DVI mode.
4) Change input to Toshiba Pattern (#16) at 720p resolution.
5) Adjust White Balance by selecting and adjusting Items 01. - 08. as performed in DVI mode.

(c) PC
1) Input Toshiba Pattern (#16) in PC input at 1024 x 768 @ 60Hz.
2) Select 01. Picture Improvement -> 01. White Balance.
3) Adjust White Balance by selecting and adjusting Items 01 - 08 as performed in DVI mode.

(d) Video
The video signal uses the video port when there is no other input signal.
However, signal uses the graphic port in PIP mode, which includes other input signals (PC, DVI, Component, etc.), Video adjustment should be performed with Video portand Graphic port separately.

1) Input Toshiba Pattern (#16) to Video Input.
2) Select 04. Option-1 -> 10. Video Port.
3) Set 10. Video Port equal to Video.
4) At Main SVC Menu, select 01. Picture Improvement -> 01. White Balance.
5) Adjust Items 01 - 08 as performed in DVI mode.
6) Return to Main SVC menu and select 04. Option-1 -> 10. Video Port.
7) Set 10. Video Port equal to Graphic.
8) At Main SVC Menu, select 01. Picture Improvement -> 01. White Balance.
9) Adjust Items 01 -> 08 as performed in DVI Mode.

* Thus, Micom saves the W/B data separately for each memory mode of the block (See the block diagram given below) during W/B adjustment.



2-2-2 White Balance Coordinates by Mode

		VIDEO	Component	PC	DVI
H/L	x	285	285	285	285
	y	290	295	295	295
	Y(fL)	32	34	30	32
L/L	x	280	285	285	285
	y	295	295	295	295
	Y(fL)	1.8	0.9	1.0	1.0

2-3 Factory Data

2-3-1 Factory OSD Main Menu

Factory Mode **Current Input Mode**

01. Picture Improvement ▶
02. Initial Setting ▶
03. PIP/Test Pattern ▶
04. Option-1 ▶
05. Option-2 ▶
06. Reset ▶

Release : 2004-04-06-17:00
Version : T_NPL50PEU-0010

☞ Indicates selected input mode
☞ Picture Adjustment
☞ Setting the Initial Values
☞ Setting the Special Features
☞ Setting particular product options
☞ Setting PDP Properties Options
☞ Initializing after saving the adjustments
☞ Software Version Information

01.Picture Improve

01.Picture Improvement **Current Input Mode**

01. White Balance ▶
02. Color ▶
03. Cont/Bri Enhancement ▶
04. Detail Enhancement ▶
05. Y/C Delay ▶

06. Motion ▶
07. DNIe ▶
08. Logic ▶
09. Picture Size ▶

☞ White Balance Adjustment
☞ Color Adjustment
☞ Contrast & Brightness Enhancement
☞ Detail Enhancement Sharpness Adjustment
☞ Y/C Delay Setting according to the System and Input Modes
☞ Motion Enhancing Adjustment
☞ DNIe Registers
☞ Logic Registers of the Panel
☞ Picture Size Registers

01.Picture Improve => 01.White Balance Adjustment

ITEM		Relevant IC	Initial Values of Input Modes			
			Video	Component	PC	DVI
01.White Balance	TV		Mode-1	Mode-2	Mode-3	Mode-4
01.R Drive	140	Logic	W/B	W/B	W/B	W/B
02.G Drive	128		W/B	W/B	W/B	W/B
03.B Drive	120		W/B	W/B	W/B	W/B
04.R Cutoff	128		W/B	W/B	W/B	W/B
05.G Cutoff	128		W/B	W/B	W/B	W/B
06.B Cutoff	128		W/B	W/B	W/B	W/B
07.Sub Contrast	37	DNIe	W/B	W/B	W/B	W/B
08.Sub Brightness	54		W/B	W/B	W/B	W/B
09.R Gain	X	AD9883	x	142	142	x
10.G Gain	X		x	142	142	x
11.B Gain	X		x	142	142	x
12.R/Cr Offset	X		x	60	60	x
13.G/Y Offset	X		x	48	48	x
14.B/Cb Offset	X		x	64	64	x
15.Auto color	on/off		x	O	O	x
❋ Input modes require respective storing the changes after adjustment.						

01~06 : Logic
07~08 : DNIe
09~15 : AD9883

01.Picture Improve => 02.Color Adjustment

ITEM		Relevant IC	Initial Values of Input Modes			
			Video	Component	PC	DVI
02.Color	TV		Mode-1	Mode-2	Mode-3	Mode-4
01. U-Saturation	36	VSP9437	36	x	x	x
02. V-saturation	36		36	x	x	x
03. RGB/YUV U-SAT	22		22	x	x	x
04. RGB/YUV V-SAT	22		22	x	x	x
05. RGB/YUV Tint	3		3	x	x	x
06. FLI-saturation	132	FLI2310	132	x	x	x
07. R Gamma	30	ASI510	30	30	30	30
08. G Gamma	30		30	30	30	30
09. B Gamma	30		30	30	30	30
10. Gain-Sel	1	CXA2151Q	1	x	x	x
11. Cr Gain	7		7	x	x	x
12. Cb Gain	7		7	x	x	x
13. Y Gain	1		1	x	x	x
14. FLI-Y/G Bir	0	FLI2310	0	x	x	x
15. FLI-Cr/R Bir	0		0	x	x	x
16. FLI-Cb/B Bir	0		0	x	x	x

01 ~05 : VSP9437
07~09 : ASI510
06 , 14~16 : FLI2310
10~13 : CXA2151Q

01.Picture Improve => 03.Contrast & Brightness Enhancement

ITEM		Relevant IC	Initial Values of Input Modes			
			Video	Component	PC	DVI
03.Cont/Bri Enhancement	TV		Mode-1	Mode-2	Mode-3	Mode-4
01.Contrast	32	VSP9437	32	x	x	x
02.Brightness	48		48	x	x	x
03.RGB/YUV Contrast	32		32	x	x	x
04.RGB/YUV Brightness	15		15	x	x	x
05.FLI-Contrast	128	FLI2310	128	x	x	x
06.FLI-Brightness	128		128	x	x	x
07.R Contrast	32	ASI510	32	32	32	32
08.G Contrast	32		32	32	32	32
09.B Contrast	32		32	32	32	32
10.R Brightness	0		0	0	0	0
11.G Brightness	0		0	0	0	0
12.B Brightness	0		0	0	0	0

01~04 : VSP9437
07~12 : ASI510
05~06 : FLI2310

01.Picture Improve => 04.Detail Enhancement

ITEM		Relevant IC	Initial Values of Input Modes			
			Video	Component	PC	DVI
04.Detail Enhancement	TV		Mode-1	Mode-2	Mode-3	Mode-4
01.VAPGAIN	0	uPD64083	0	x	x	x
02.VAPINV	0		0	x	x	x
03.YPFT	3		3	x	x	x
04.YPFG	6		6	x	x	x
05.APK-1st-BPM	1	VSP9437	1	x	x	x
06.APK-2nd-BPM	0		0	x	x	x
07.Denoise-BPM	0		0	x	x	x
08.APK-1st-HPM	6		6	x	x	x
09.APK-2nd-HPM	3		3	x	x	x
10.Denoise-HPM	0		0	x	x	x
11.HenhGain	64	FLI2310	64	x	x	x
12.HLEGain	64		64	x	x	x
13.HChrEnGain	32		32	x	x	x

01~04 : uPD64083
05~10 : VSP9437
11~13 : FLI2310

01.Picture Improve => 05.Y/C Delay Setting according to the System and Input Modes

ITEM		Relevant IC	Initial Values of Input Modes			
			Video	Component	PC	DVI
05.Y/C Delay	TV		Mode-1	Mode-2	Mode-3	Mode-4
01. PAL-B/G	254	VSP9437	254	x	x	x
02. PAL-D/K/L	254		254	x	x	x
03. PAL-I	254		254	x	x	x
04. SECAM-B/G	254		254	x	x	x
05. SECAM-D/K/L	251		251	x	x	x
06. NTSC	254		254	x	x	x
07. PAL-AV	254		254	x	x	x
08. SECAM-AV	252		252	x	x	x
09. NTSC-AV	254		254	x	x	x
10. RGB/YUV-Y	90		90	x	x	x
11. RGB/YUV-UV	90		90	x	x	x
12. FLI-Y	5	FLI2310	5	x	x	x
13. FLI-C	11		11	x	x	x

01~11 : VSP9437
12~13 : FLI2310

01.Picture Improve => 06.Motion Enhancing Adjustment

ITEM		Relevant IC	Initial Values of Input Modes			
			Video	Component	PC	DVI
06.Motion	TV		Mode-1	Mode-2	Mode-3	Mode-4
01.HPLL Speed-1	0	VSP9437-M	0	x	x	x
02.HPLL Speed-2	0	VSP9437-S	0	x	x	x
03.V-motion Tresh	42	FLI2310	42	x	x	x

01 : VSP9437-M
02 : VSP9437-S
03 : FLI2310

01.Picture Improve => 07.DNIe Registers

ITEM		Relevant IC	Initial Values of Input Modes			
			Video	Component	PC	DVI
07.DNIe	TV		Mode-1	Mode-2	Mode-3	Mode-4
01.SUB BRIGHT	W/B	DNIe	W/B	W/B	W/B	W/B
02.SUB CONT	W/B		W/B	W/B	W/B	W/B
03.SCALE MAX	48		48	48	48	48
04.SCALE MIN	16		16	16	16	16
05.TH HPF	0		0	0	0	0
06.TH EDGE	4		4	4	4	4
07.NR SEL	2		2	2	2	2
08.CE UPPER	240		220	240	240	240
09.CE CUTOFF	32		32	32	32	32
10. CE GAIN	64		64	80	64	64
11. DCE GAIN	75		75	75	75	75
12. SKIN ON	0		0	0	0	0
13. CTI GAIN	0		0	0	0	0
14. DE NOISE GAIN	8		8	8	8	8
15. TH CORING	3		3	2	3	3
16. PATT SEL	0		0	0	0	0
17. NOISE TH2	100		100	100	100	100
18. H CONT	63		63	63	63	63
19. V CONT	63		32	63	63	63
20. BLACK GAIN	2		6	6	2	2
21. WHITE GAIN	31		31	31	31	31
22. WTE GAIN	300		300	300	300	300
23. CTE GAIN	176		176	176	176	176

01~23 : DNIe

01.Picture Improve => 08.Logic Registers

ITEM		Relevant IC	Initial Values of Input Modes			
			Video	Component	PC	DVI
08.Logic	TV		Mode-1	Mode-2	Mode-3	Mode-4
01.R DRIVE	W/B	Logic	W/B	W/B	W/B	W/B
02.G DRIVE	128		128	128	128	128
03.B DRIVE	W/B		W/B	W/B	W/B	W/B
04.R CUTOFF	W/B		W/B	W/B	W/B	W/B
05.G CUTOFF	128		128	128	128	128
06.B CUTOFF	W/B		W/B	W/B	W/B	W/B
07.GAMMA	1		1	1	1	1
08.GTS SET	1		0	0	0	0
09.ERD MODE	2		2	2	2	2
10.RANDOM NOISE	0		0	0	0	0
11.DIFF FILTER	1		1	1	1	1
12.APC	1		1	1	1	1
13.APC SET	0		0	0	0	0
14.APC VALUE	127		127	127	127	127
15.ACTIVE VPOS	12		12	12	12	12
16.ACTIVE HPOS	19		19	19	19	19
17.VSYNC POS	3		3	3	3	3
18.HSYNC POS	32		32	32	32	32
19.VSYNC WIDTH	2		2	2	2	2
20.HSYNC WIDTH	12		12	12	12	12

01~20 : Logic

01.Picture Improve => 09.Picture Size Registers

ITEM		Relevant IC	Initial Values of Input Modes			
			Video	Component	PC	DVI
09.Picture Size	TV		Mode-1	Mode-2	Mode-3	Mode-4
01. H START OFFSET	0	ASI510	0	0	0	0
02. V START OFFSET	0		0	0	0	0
03. H END OFFSET	0		0	0	0	0
04. V END OFFSET	0		0	0	0	0
05.OVERSCAN B	38		38	38	38	38
06.OVERSCAN G	38		38	38	38	38
07.OVERSCAN R	38		38	38	38	38

01~07 : ASI510

02.Setting the Initial Values

02.Initial Setting **Current Input Mode**
01. Initial P-Mode ▶
02. P-Mode Value ▶
03. Initial Color Tone ▶
04. Color Tone Value ▶

☞ Indicates selected input mode
☞ Reset after saving the P-Mode adjustments
☞ P-MODE the data Values
☞ Reset after saving the color tone adjustments
☞ Color tone the data Values

02.Initial Setting => 01.Initial P-Mode

01.Initial P-Mode **Current Input Mode**
01. Dynamic
02. Standard
03. Movie
04. Custom

Available options for the PC/DVI Mode are High,Middle, Low and Custom.

02.Initial Setting => 02.P-Mode Value

02. P-Mode Value **Current Input Mode**
01. Dynamic ▶
02. Standard ▶
03. Movie ▶
04. Custom ▶

Available options for the PC/DVI Mode are High,Middle, Low and Custom.

02.Initial Setting => 02.P-Mode Value => 01.Dynamic

01.Dynamic	Current Input Mode
01. Contrast	◀ 100 ▶
02. Brightness	◀ 45 ▶
03. Sharpness	◀ 75 ▶
04. Color	◀ 55 ▶
05. Tint	◀ 50 ▶

02.Initial Setting => 02.P-Mode Value => 02.Standard

02.Standard	Current Input Mode
01. Contrast	◀ 80 ▶
02. Brightness	◀ 50 ▶
03. Sharpness	◀ 50 ▶
04. Color	◀ 50 ▶
05. Tint	◀ 50 ▶

02.Initial Setting => 02.P-Mode Value => 03.Movie

03.Movie	Current Input Mode
01. Contrast	◀ 50 ▶
02. Brightness	◀ 55 ▶
03. Sharpness	◀ 25 ▶
04. Color	◀ 40 ▶
05. Tint	◀ 50 ▶

02.Initial Setting => 02.P-Mode Value => 04.Custom

04.Custom	Current Input Mode
01. Contrast	◀ 80 ▶
02. Brightness	◀ 50 ▶
03. Sharpness	◀ 50 ▶
04. Color	◀ 50 ▶
05. Tint	◀ 50 ▶

02.Initial Setting => 03.Initial Color Tone

02.Initial Setting	Current Input Mode
01. Cool2	
02. Cool1	
03. Normal	
04. Warm1	
05. Warm2	

❋ Available Settings for the PC Mode are Custom,Color Tone 1, Color Tone 2, Color Tone 3

❋ Available options for the DVI Mode are ColorTone1, ColorTone2, ColorTone3

02.Initial Setting => 04.Color Tone Value

04.Color Tone Value	Current Input Mode
01. Cool2	
02. Cool1	
03. Normal	
04. Warm1	
05. Warm2	

❋ Adjusting and Storing the Changes:
Change the White Balance (Color Temperature)

1. Selecting an item will display the same options to those of the White Balance.
2. Available options for the PC Mode are Custom,Color Tone 1, Color Tone 2, Color Tone 3
3. Available options for the DVI Mode are ColorTone1, ColorTone2, ColorTone3.
4. Data Storing is classifled according to the PC Mode & Other Modes.

03.PIP/TTX/Test Pattern

ITEM		Relevant IC	Initial Values of Input Modes			
			Video	Component	PC	DVI
03.PIP/Test Pattern	TV		Mode-1	Mode-2	Mode-3	Mode-4
01.PIP R CONT	32	ASI510	32	32	32	32
02.PIP G CONT	32		32	32	32	32
03.PIP B CONT	32		32	32	32	32
04.PIP R BRIGHT	0		0	0	0	0
05.PIP G BRIGHT	0		0	0	0	0
06.PIP B BRIGHT	0		0	0	0	0
07.PIP FILTER LC	0		0	0	0	0
08.PIP FILTER ML	0		0	0	0	0
09.PIP FILTER MR	0		0	0	0	0
10.PIP FILTER UC	0		0	0	0	0
11. TTX CONT	0	SDA6001	0	0	0	0
12. TTX BRIGHTNESS	0		0	0	0	0
13.LOG PATTERN	0	Logic ASI510	0	0	0	0
14.LOG HIGH LEVEL	255		255	255	255	255
15.LOG LOW LEVEL	0		0	0	0	0
16.ASI COLORBAR	1		1	1	1	1

01~10 : ASI510
11~12 : SDA6001
13~16 : Logic, ASI510

04.Option-1

04.Option-1	Current Input Mode	
00. AGC	◀ Off ▶	00. Off => On
01. TTX	Off	01. Off => On
02. CW/CS	CW	02. CW(EUROPE) => CS(SOUTHASIA)
03. TELE-WEB	OFF	03. Off => On
04. LANGUAGE GROUP	EUROPE	04. Europe => Asia
05. LANGUAGE	ENGLISH	05. English => 18 Language(Europe)
06. ATM	ON	06. On => Off
07. Melody Volume	10	07. 0~ 20
08. LNA Search	Off	08. Off => On
09. LNA	ON	09. On => Off
10. CHILD LOCK	ON	10. On => Off
11. TOP TTX	ON	11. On => Off
12. TTX GROUP	WEST EUROPE	12. W.Europe => 6 Group
13. HIGH DEVIATION	Off	13. Off => On
14. SD Delay	3	14. 0(1.8ms), 1(38ms), 2(75ms), 3(150ms)
15. HD Delay	2	15. 0(1.8ms), 1(38ms), 2(75ms), 3(150ms)
16. Video Port	Graphic	16. Graphic <-> Video

02. CW/CS : CW => CS
- CW : PAL, SECAM-B/G, D/K, I, L/L', NTSC4.43 = West Europe
- CS : PAL, SECAM-B/G, D/K, I, NTSC3.58/4.43 = Countries except West Europe.
  Ex) Southeast Asia,the Middle East,Russia,China, etc.

03. Tele-Web
- Off : TeleWeb non-broadcasting Country
- On : TeleWeb broadcasting Country

04. Language Group : Europe => Asia
-. Europe : 18 languages
-. Asia : 7 languages

05. Language : Select language
- Language Group is Europe : 18 languages
  (English=>Bulgarian=>Croatian=>Czechoslovak=>Netherlandish=>French=>German=>Greek=>Hungarian=>
  Italian=>Poland=>Portuguese=>Rumanian=>Russian=>Spanish=>Swedish=>Turki=>Yugoslave)
- Language Group is Asia : 7 languages
  (English=>Arabic=>French=>Indonesian=>Malay=>Persian=>Chinese)

06. ATM : On => Off
-. ATM available region : On
-. ATM non-available region : Off

09. LNA
- On : Using LNA built-in Tuner
- Off : Not in use LNA built-in Tuner

10. Child Lock
-. On : TV Model
-. Off : Model has deletion of Child Lock function

11. Top TTX
- On : Only Top broadcasting region set 'On'
  Ex) Germany, Switzerland, etc
- Off : Country except Top broadcasting region.

12. TTX Group : TTX Language Group and National Option Code
- By language, Select at the factory option table.
- TTX language will be displayed by National Option code.
- TTX Language Group by each country : 6 Groups
  West Europe => East Europe => Turkish/Greek => Cyrillic => Arabic/Hebrew => Farsi/Hebrew

13. High Deviation : To prevent the Sound Buzz according to the regional characteristics of the input signal.
- Set to 'Off' for the standardized sound input signal, in the region such as Europe.
- Set to 'On' for the over-modulated sound input signal, in the region such as Southeast Asia.

14. SD Delay : AV mode Delay
1.8ms delay --------- delay0
38ms delay --------- delay1
75ms delay --------- delay2
150ms delay (max) --------- delay3

15. HD Delay : DTV/PC/DVI mode Delay

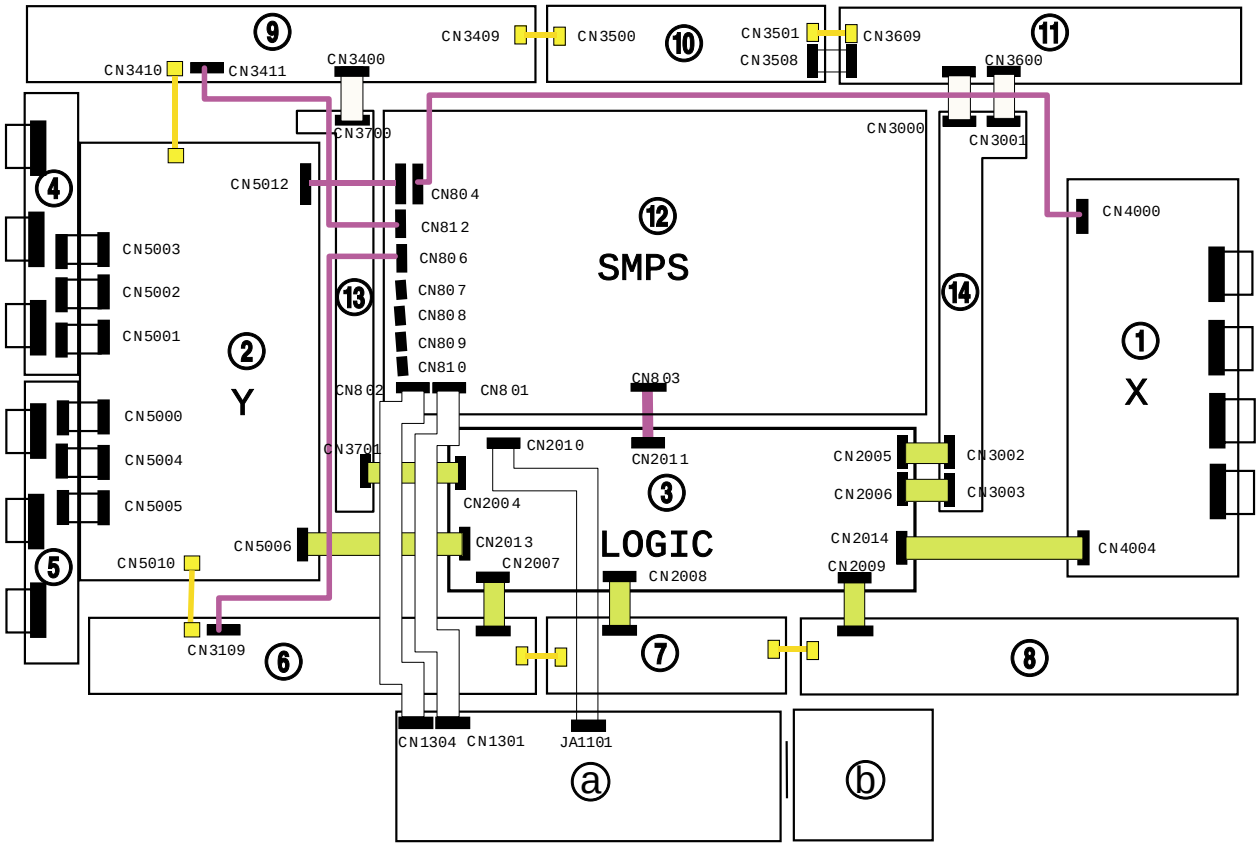
16. Video Port : Setting of Aurora Input Port for VIDEO signal
- Graphic : Input Video Signal though Grapgic port of Aurora (In case of NON-PIP VIDEO)
- Video : Input Video Signal though Grapgic port of Aurora (In case of PIP VIDEO)

05.Option-2

05.Option-2	Current Input Mode
00. Pixel Shift	◄ V ►
01. Shift Test	0
02. Pixel Number	1
03. Shift Line	1
04. Shift Time	4
05. Number Range	4
06. Line Range	4
07. Temp Protection	On
08. DNIe DEMO	On
09. PILOT HIGH	21
10. PILOT LOW	16
11. CHECKSUM	0000

00. OFF <-> V <-> G <-> V/G
01. 0: minute , 1: SEC
02. Left,right movement Pixel
03. Upper, low movement Pixel
04. Shift Test

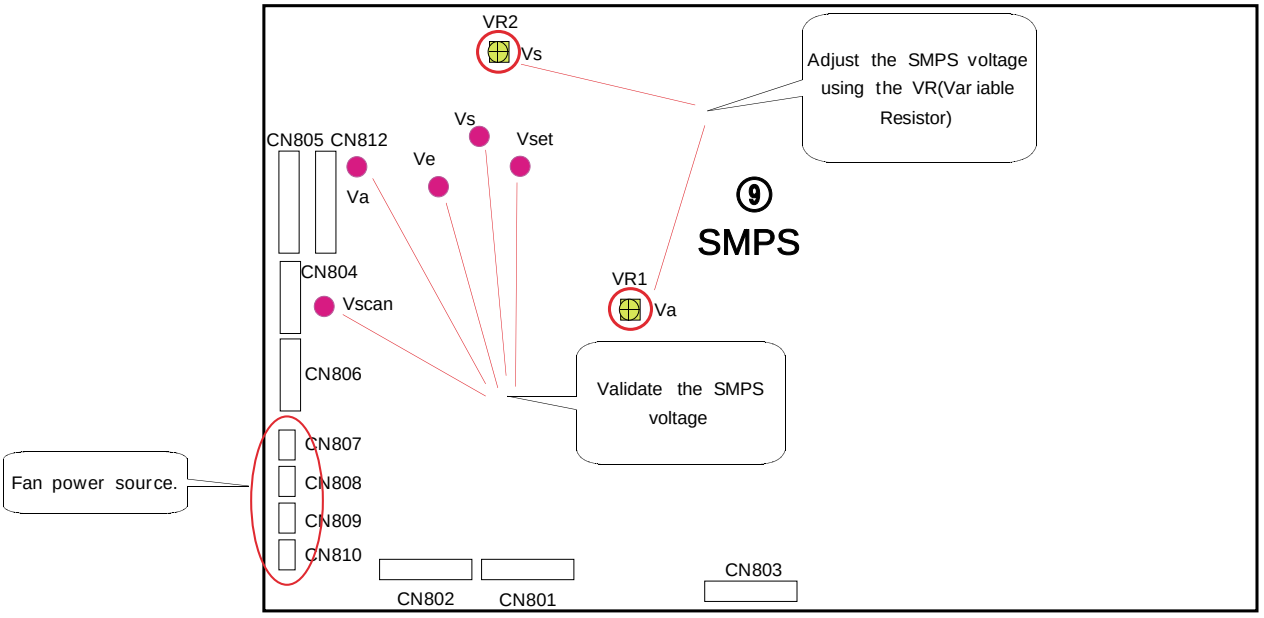
2-4 Module Block



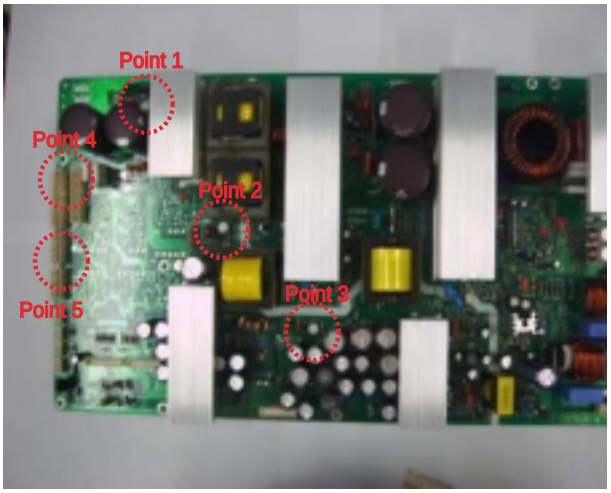
No	Description	Code No	Specification
-	ASSY PDP P-MODULE	BN96-00985A	M3,S50HW-XD03,D66A,D3.0,1366 X 768,NTSC/PAL,50 INCH,V3
①	ASSY PDP P-X MAIN	BN96-00999A	LJ92-00852A,S50HW-XD03,D66A,D3.0,1366 X 768,X MAIN BOARD,NTSC/PAL,50 INCH,LJ92-0
②	ASSY PDP P-Y MAIN	BN96-01001A	LJ92-00853A,S50HW-XD03,D66A,D3.0,1366 X 768,Y MAIN BOARD,NTSC/PAL,50 INCH,LJ92-0
③	ASSY PDP P-LOGIC MAIN	BN96-01012A	LJ92-00949A,S50HW-XD03,D66A,D3.0,1366 X 768,Logic main board,NTSC/PAL,50 INCH,LJ
④	ASSY PDP P-Y BUFFER(UPPER)	BN96-01002A	LJ92-00880A,S50HW-XD03,D66A,D3.0,1366 X 768,Y buff upper BOARD,NTSC/PAL,50 INCH,
⑤	ASSY PDP P-Y BUFFER(DOWN)	BN96-01003A	LJ92-00881A,S50HW-XD03,D66A,D3.0,1366 X 768,Y buff down BOARD,NTSC/PAL,50 INCH,L
⑥	ASSY PDP P-E BUFFER	BN96-01004A	LJ92-00917A,S50HW-XD03,D66A,D3.0,1366 X 768,E buffer BOARD,NTSC/PAL,50 INCH,LJ92
⑦	ASSY PDP P-F BUFFER	BN96-01005A	LJ92-00918A,S50HW-XD03,D66A,D3.0,1366 X 768,F buffer BOARD,NTSC/PAL,50 INCH,LJ92
⑧	ASSY PDP P-G BUFFER	BN96-01006A	LJ92-00919A,S50HW-XD03,D66A,D3.0,1366 X 768,G buffer BOARD,NTSC/PAL,50 INCH,LJ92
⑨	ASSY PDP P-H BUFFER	BN96-01007A	LJ92-00920A,S50HW-XD03,D66A,D3.0,1366 X 768,H buffer BOARD,NTSC/PAL,50 INCH,LJ92
⑩	ASSY PDP P-I BUFFER	BN96-01008A	LJ92-00921A,S50HW-XD03,D66A,D3.0,1366 X 768,I buffer BOARD,NTSC/PAL,50 INCH,LJ92
⑪	ASSY PDP P-J BUFFER	BN96-01009A	LJ92-00922A,S50HW-XD03,D66A,D3.0,1366 X 768,J buffer BOARD,NTSC/PAL,50 INCH,LJ92
⑫	ASSY PCB MISC-SMPS	BN94-00494U	SPD-50P4HD,D66A,DAVINCI
⑬	ASSY PDP P-LOGIC SUB(LEFT)	BN96-01010A	LJ92-00923A,S50HW-XD03,D66A,D3.0,1366 X 768,Logic sub(left)BOARD,NTSC/PAL,50 INC
⑭	ASSY PDP P-LOGIC SUB(RIGHT)	BN96-01011A	LJ92-00959A,S50HW-XD03,D66A,D3.0,1366 X 768,Logic sub(right) bd,NTSC/PAL,50 INCH
ⓐ	ASSY PCB MISC-DIGITAL	BN94-00551A	PS50P4HX/XEC,D68A,NAPOLEON
ⓑ	ASSY PCB MISC-TUNER	BN96-00518C	PS50P4HX/XEC,D68A,NAPOLEON

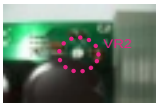
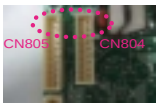
Test Point
VR : Variable Resistor
Pin Connector

Output	Va	Vsc	Vs	Ve	Vset
Voltage	See the labels attached on the base chassis				



SMPS Volume Resistor Adjustment



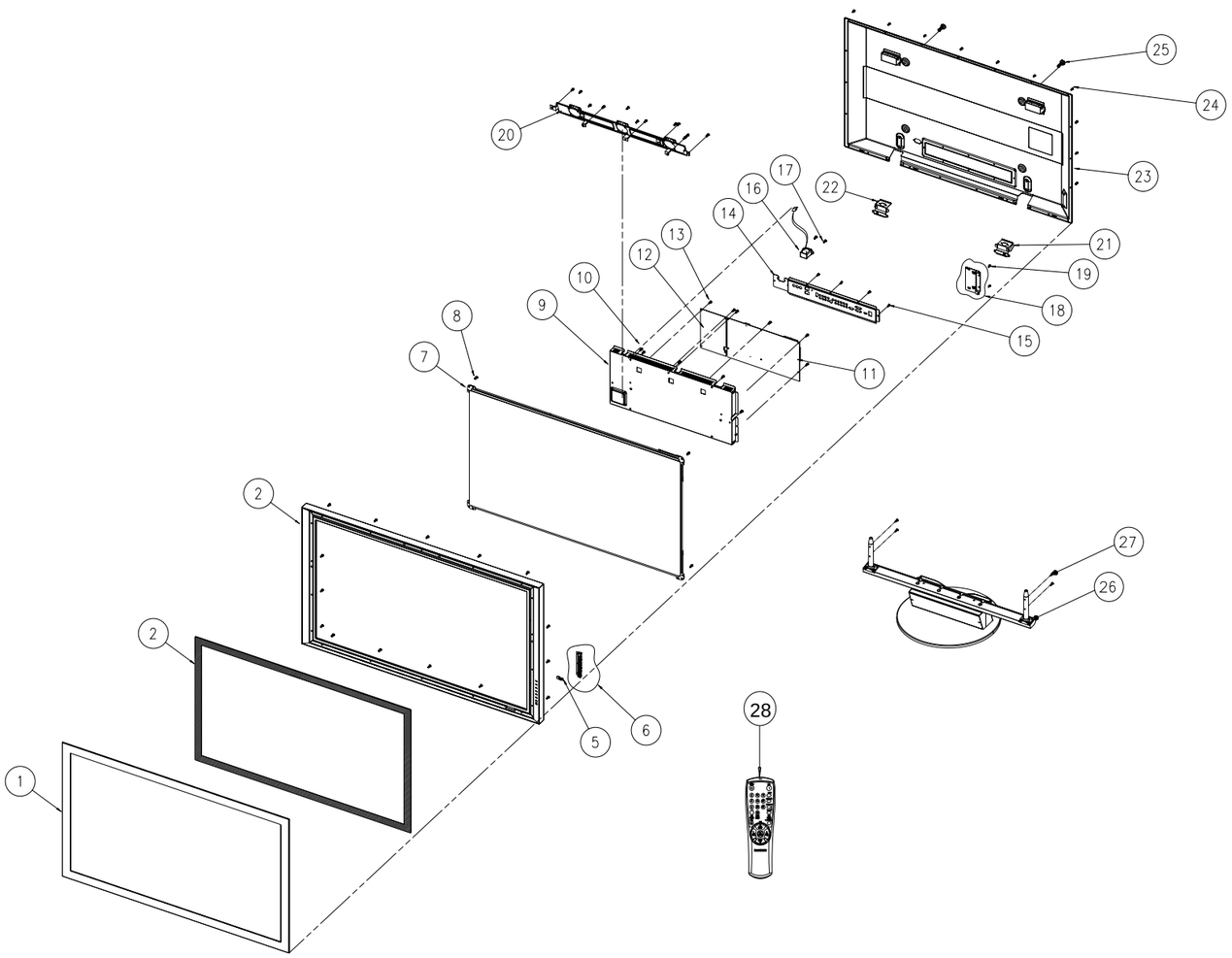
Point 1	Volume Resistor VR2 for "Vs" Adjustment	
Point 2	Volume Resistor VR1 for "Va" Adjustment	
Point 3	Volume Resistor VR6 is a Factory Setting Point. Don' t touch.	
Point 4	Test Point for "Vs" Adjustment CN 805 Pin No. 9, 10 or CN 804 Pin No. 8, 9	
Point 5	Test Point for "Va" Adjustment CN 812 Pin No. 1, 2 or CN 806 Pin No. 1, 2	

☞ Notes

1. When the SMPS-PCB is replaced, the Va, Vsc, Vs, Ve and Vset voltages must be checked and adjusted to the proper levels indicated on the panel sticker.

3. Exploded View & Parts List

3-1 PS50P4HX/XEC



No	Code No	Description;Specification	Q'ty		S.N.A
1	BN96-00818D	ASSY COVER P-FRONT;50P4,ABS,HB,BLK,BK101	1	M0003	S.N.A
2	BN64-00125A	SCREEN-EMI,FITER;FILTER,50P3,T47%,1155+6	1	T0055	
3	BN96-00823A	ASSY MISC P-BRKT FRONT;50P4,AL	1		
4	6003-001188	SCREW-TAPTITE;BH,+,B,M4,L10,YEL,SWRCH18A	16	T0081	S.N.A
5	BN96-00880A	ASSY BOARD P-IR;SPD-50P4HD,IR	1	T0714	
6	BN96-00878A	ASSY BOARD P-FUNCTION;SPD-50P4HD,FUNCTIO	1	M0145	
7	BN96-00985A	ASSY PDP P-MODULE;M3,S50HW-XD03,D66A,D3.	1	T0044	
8	6006-001126	SCREW-MACHINE;WSP,PH,+,M5,L12,NI PLT,SWR	4	CCM1	
9	BP96-00447B	ASSY COVER P-BACK SUB;50P4,SECC,T1.0,SEA	1	T0008	
10	6001-001786	SCREW-MACHINE;TH,+,M4,L8,ZPC(BLK),SWRCH1	1	CCM1	S.N.A
11	BN94-00551A	ASSY PCB MISC-DIGITAL;PS50P4HX/XEC,D68A,	1	T0132	S.N.A
12	BN94-00518C	ASSY PCB MISC-TUNER;PS50P4HX/XEC,D68A,NA	1	T0152	S.N.A
13	6006-001132	SCREW-MACHINE;WSP,PH,+,M3,L8,NI PLT,SWRC	12	CCM1	S.N.A
14	BP96-00448D	ASSY COVER P-BACK TERMINAL;50P4,SECC,T1.	1		S.N.A
15	6001-001786	SCREW-MACHINE;TH,+,M4,L8,ZPC(BLK),SWRCH1	2	CCM1	S.N.A
16	2901-001282	FILTER-EMI AC LINE;250V,10A,-,330pF,50x2	1	FT532	
17	6001-000049	SCREW-MACHINE;FH,+,M3,L10,ZPC(WHT),SWRCH	2	CCM1	
18	BN94-00577A	ASSY PCB MISC-SIDE A/V;PS50P4H,D68A,NAPOLEON	1	CIS2	
20	BN31-00005A	FAN;612F/39L,SHP-700,PBTP / PA,DMD Fan,8	1	T0136	
21	BN63-01001A	COVER-STAND R;SPD-50P4H,AL,T1.2	1		
22	BN63-01002A	COVER-STAND L;SPD-50P4H,AL,T1.2	1		
23	BN96-00819B	ASSY COVER P-BACK;50P4,AL,T1.2,SEA	1	T0001	S.N.A
24	6001-001786	SCREW-MACHINE;TH,+,M4,L8,ZPC(BLK),SWRCH1	28	CCM1	S.N.A
25	6006-001112	SCREW-MACHINE;WP,PH,+,M8,L16,ZPC(BLK),SW	4	CCM1	S.N.A
26	SMN5040	ASSY -STAND	1		
27	6003-001025	SCREW-MACHINE	4		
28	BN59-00397A	REMOCON;TM77,MOZART,47,SVM-3012,EX,PAL	1	T0074	

4. SERVICE ITEM

4-1 PS50P4HX/XEC

You can search for the updated part code through ITSELF web site.
URL : http://itself.sec.samsung.co.kr

Loc.	Code No	Description;Specification	Q'ty	S.N.A
T0568	AA39-30007A	CBF IF;-,T,100mm,1365#26	1	
T0568	BN39-00338A	CBF IF;D56A/PS42P3S,1P,1365#26,50MM,BLAC	1	
TU102	BN40-00011A	TUNER;TCPQ9091PC27D(S),TCPQ9091PC27D(S),	1	
TU101	BN40-00024A	TUNER;TCLQ9091PC28A(S),TCLQ9091PC28A(S),	1	
T0074	BN59-00397A	REMOCON;TM77,MOZART,47,SVM-3012,EX,PAL	1	
T0124	BN94-00577A	ASSY PCB MISC-SMPS;PS50P4H,D68A,NAPOLEON	1	
CIS2	BN94-00494Z	ASSY PCB MISC-SIDE A/V;SPD-50P4HD,D66A	1	
T0132	BN94-00551A	ASSY PCB MISC-DIGITAL;PS50P4HX/XEC,D68A,	1	S.N.A
T0152	BN94-00518C	ASSY PCB MISC-TUNER;PS50P4HX/XEC,D68A,NA	1	S.N.A
M0003	BN96-00818D	ASSY COVER P-FRONT;50P4,ABS,HB,BLK,BK101	1	S.N.A
T0001	BN96-00819B	ASSY COVER P-BACK;50P4,AL,T1.2,SEA	1	S.N.A
T0044	BN96-00985A	ASSY PDP P-MODULE;M3,S50HW-XD03,D66A,D3.	1	
T0073	BN96-00999A	ASSY PDP P-X MAIN BOARD;LJ92-00852A,S50H	1	
T0096	BN96-01001A	ASSY PDP P-Y MAIN BOARD;LJ92-00853A,S50H	1	
T0111	BN96-01002A	ASSY PDP P-Y BUFF UPPER BOARD;LJ92-00880	1	
T0112	BN96-01003A	ASSY PDP P-Y BUFF DOWN BOARD;LJ92-00881A	1	
T0113	BN96-01004A	ASSY PDP P-E BUFFER BOARD;LJ92-00917A,S5	1	
T0114	BN96-01005A	ASSY PDP P-F BUFFER BOARD;LJ92-00918A,S5	1	
T0115	BN96-01006A	ASSY PDP P-G BUFFER BOARD;LJ92-00919A,S5	1	
T0116	BN96-01007A	ASSY PDP P-H BUFFER BOARD;LJ92-00920A,S5	1	
T0117	BN96-01008A	ASSY PDP P-I BUFFER BOARD;LJ92-00921A,S5	1	
T0118	BN96-01009A	ASSY PDP P-J BUFFER BOARD;LJ92-00922A,S5	1	
	BN96-01010A	ASSY PDP P;LJ92-00923A,S50HW-XD03,D66A,D	1	
T0119	BN96-01011A	ASSY PDP P-LOGIC SUB(RIGHT)BD;LJ92-00959	1	
T0037	BN96-01012A	ASSY PDP P-LOGIC MAIN BOARD;LJ92-00949A,	1	
T0121	BN96-01090A	ASSY COVER P-STAND L;50P4,AL,T1.2	1	
T0120	BN96-01091A	ASSY COVER P-STAND R;50P4,AL,T1.2	1	

MEMO

5. Schematic Diagrams

5-1 SCART(Digital PCB)

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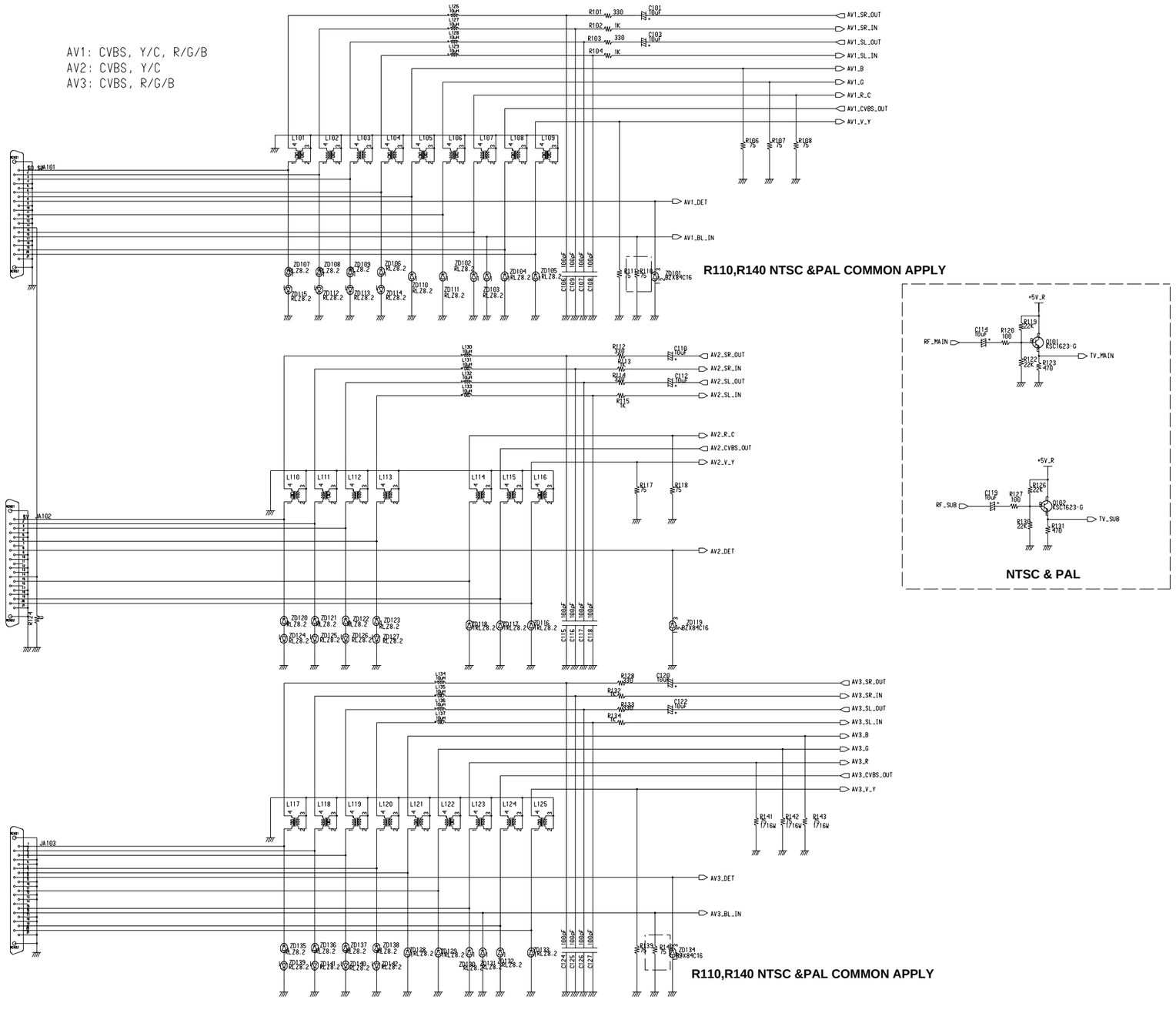

5-2 VIDEO SW(Digital PCB)

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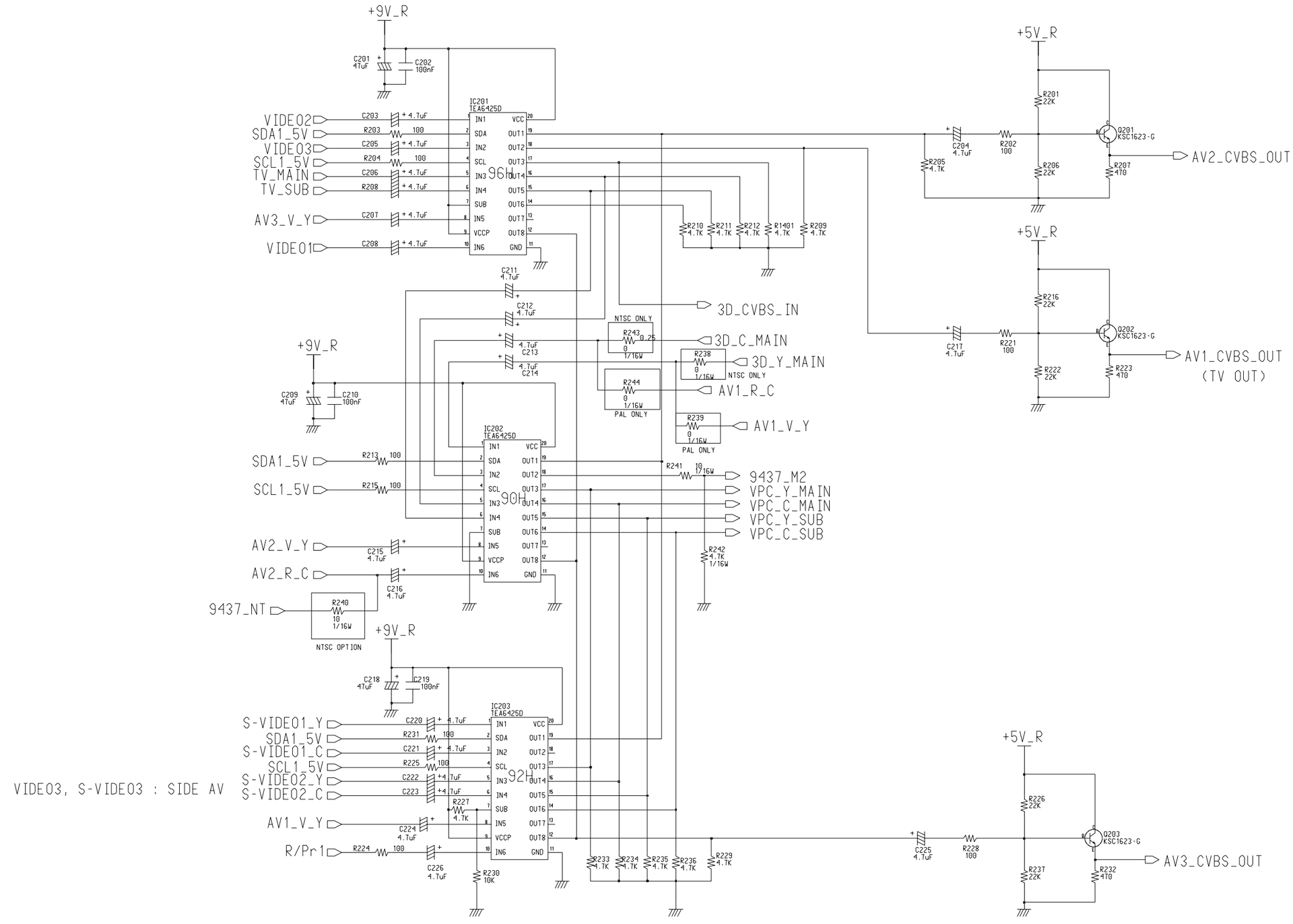

5-3 VSP9437(Digital PCB)

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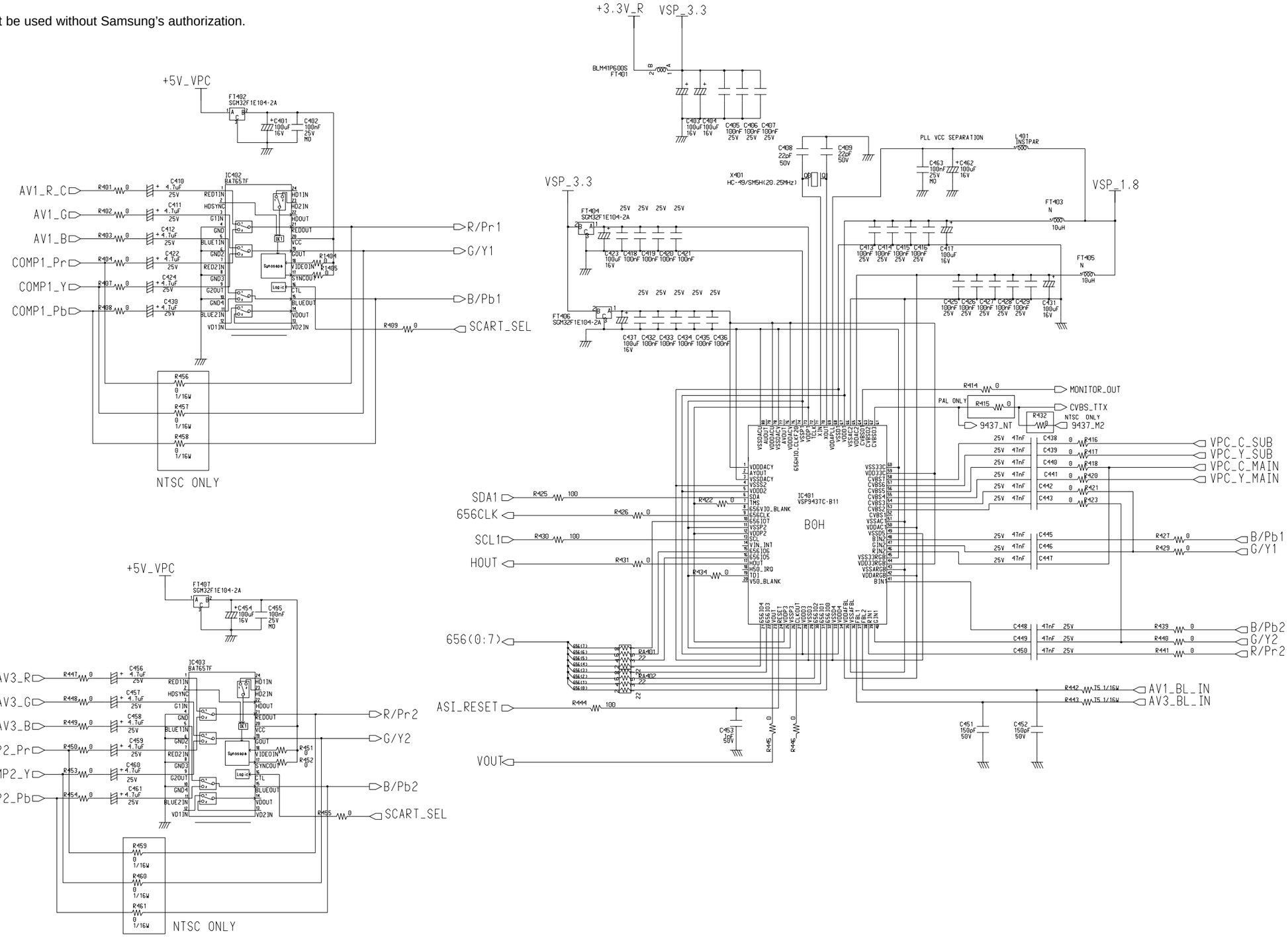

5-4 PCIN 9883 2151(Digital PCB)

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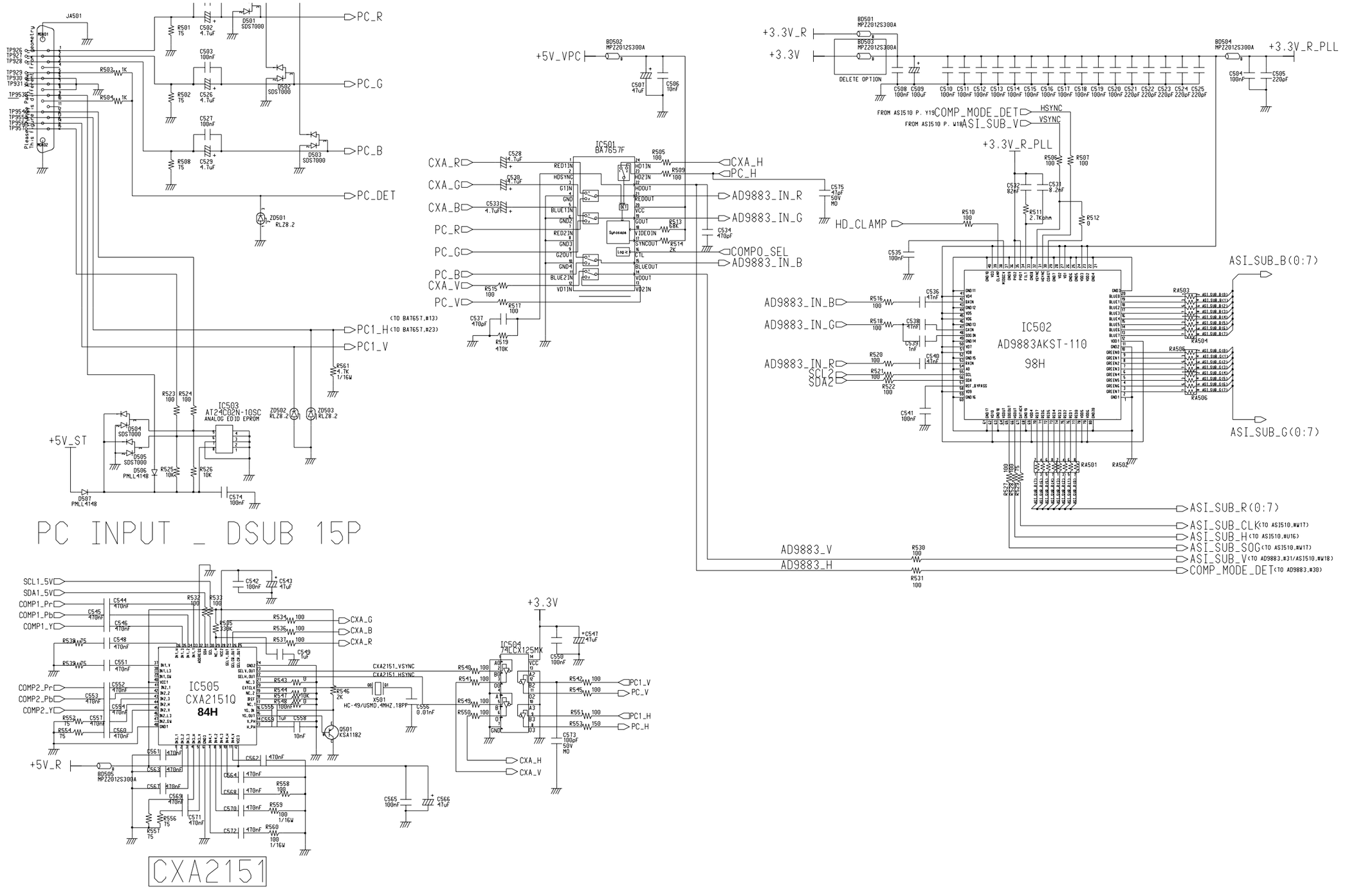

5-5 FLI2310(Digital PCB)

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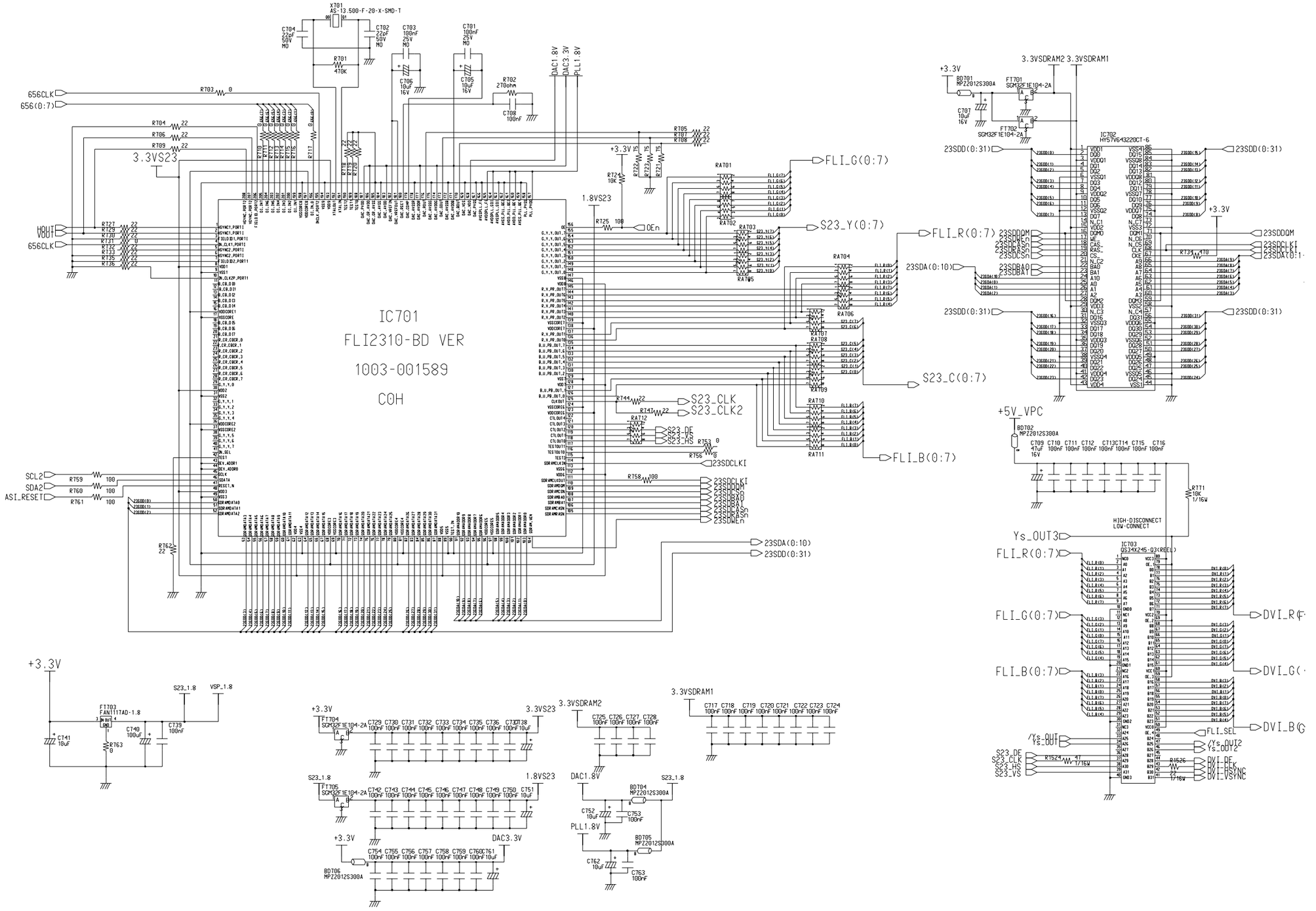

5-6 ASI510(Digital PCB)

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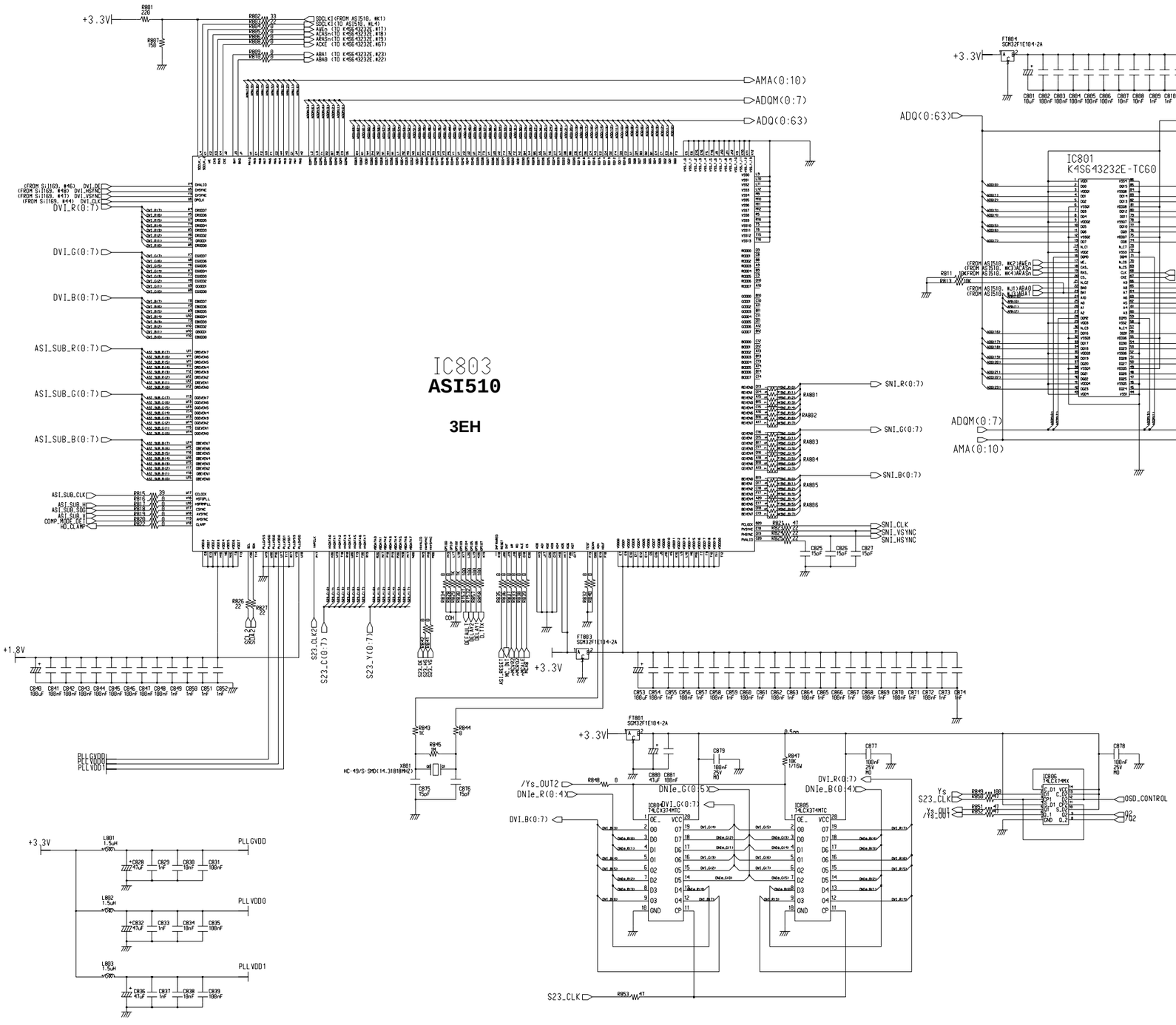

5-7 DVI SII169(Digital PCB)

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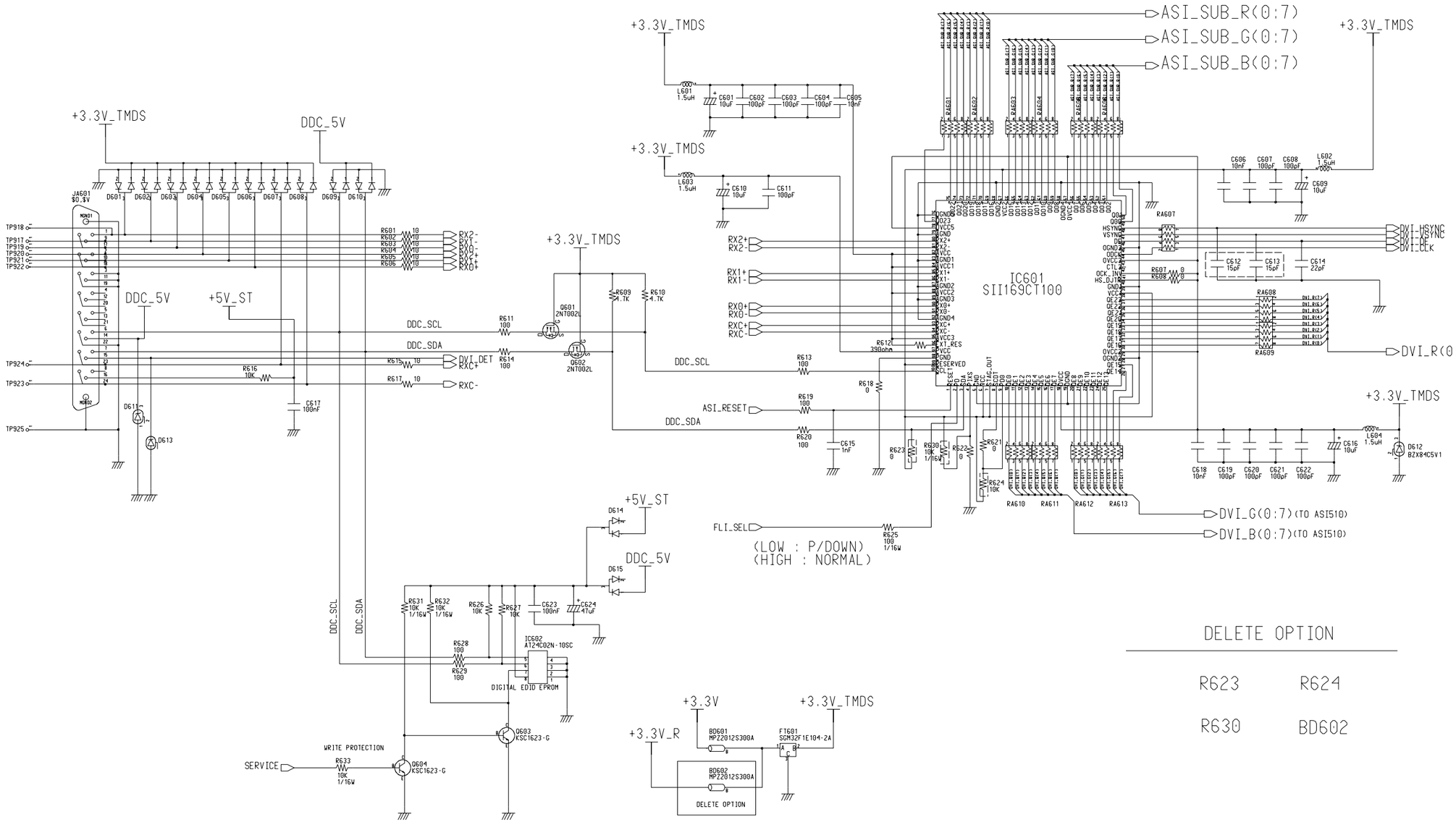

5-8 POWER(Digital PCB)

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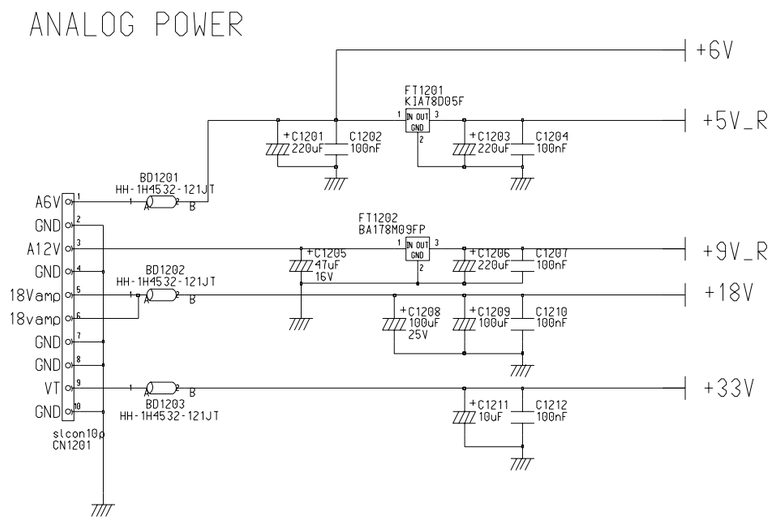

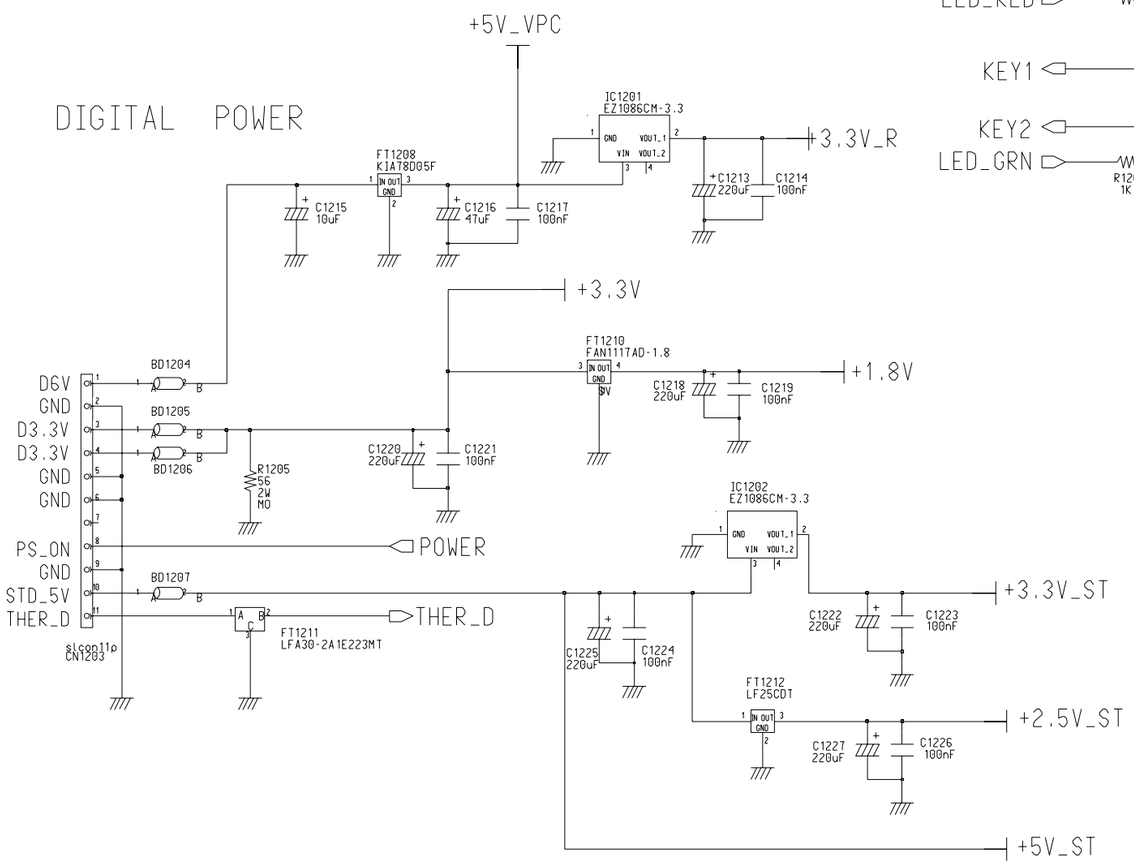

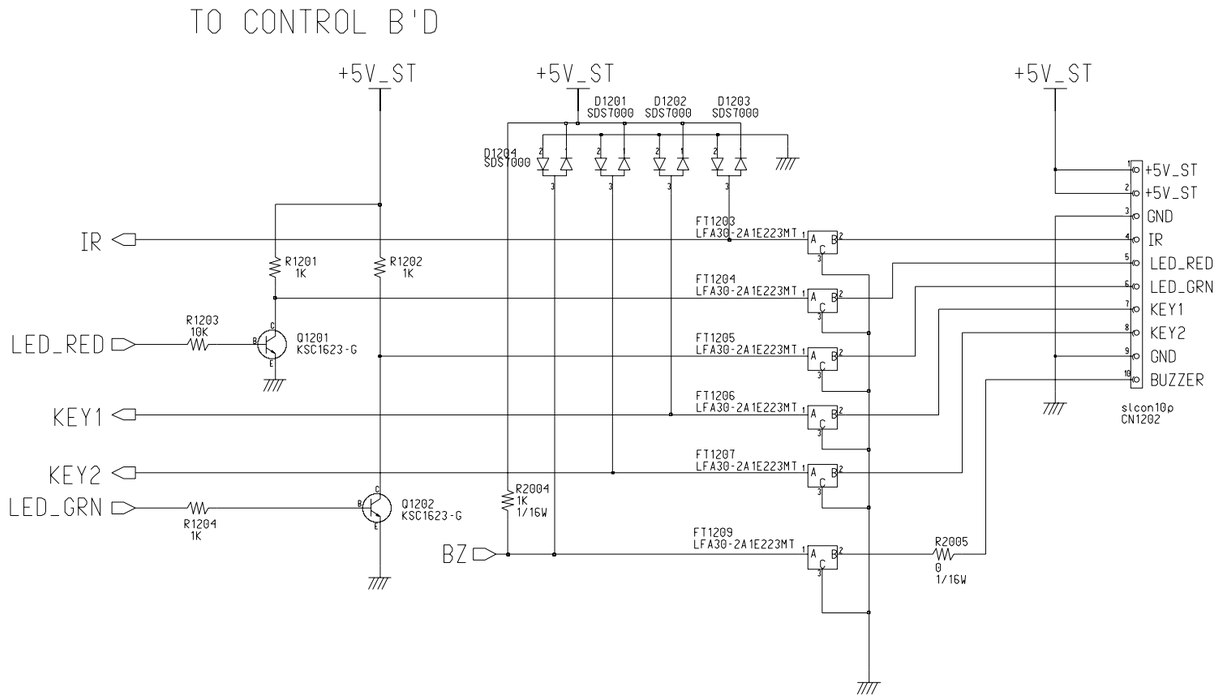

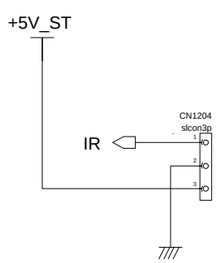

5-9 JACK INPUT(Digital PCB)

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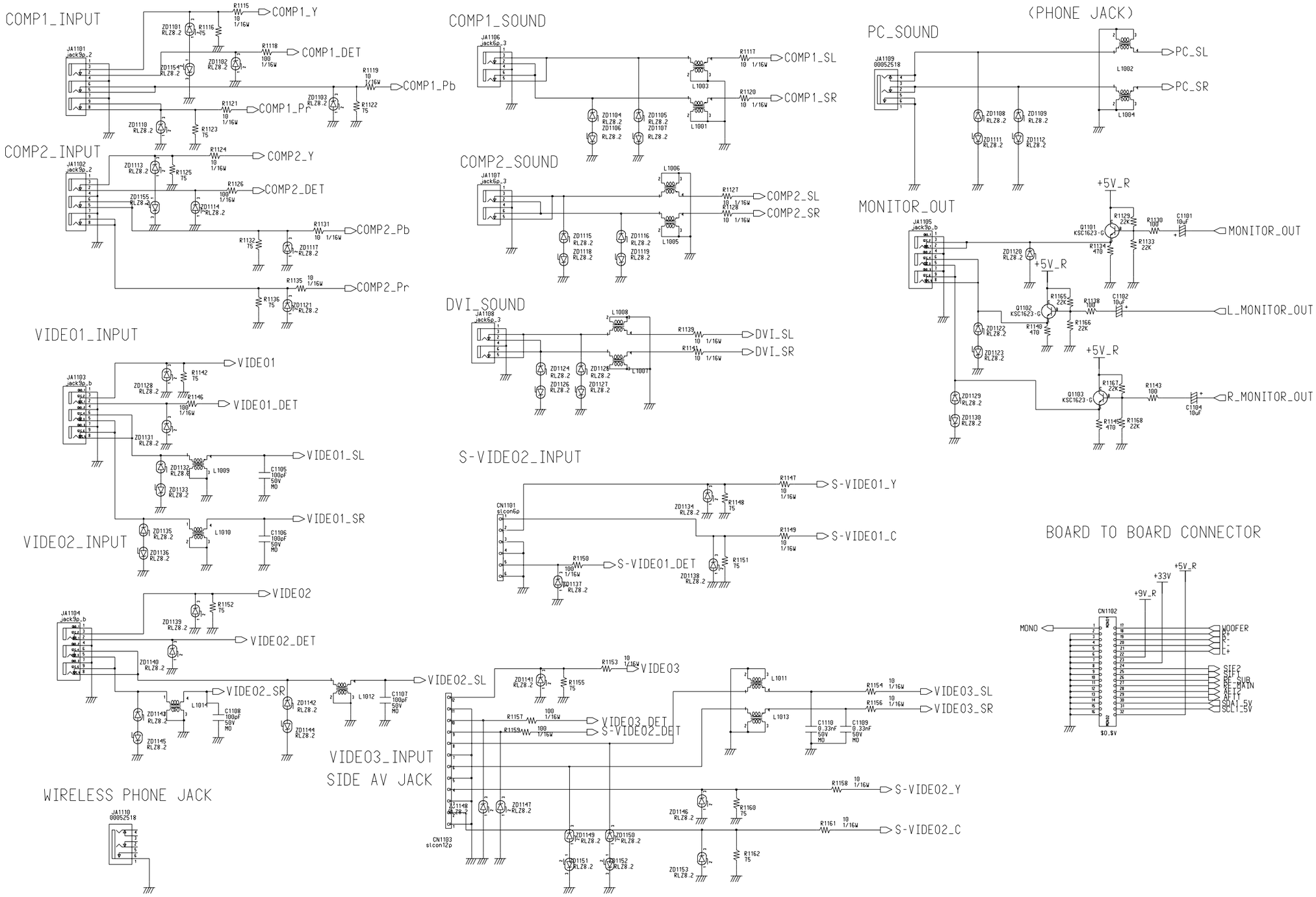

Schematic Diagrams

5-10 SDA6001(Digital PCB)

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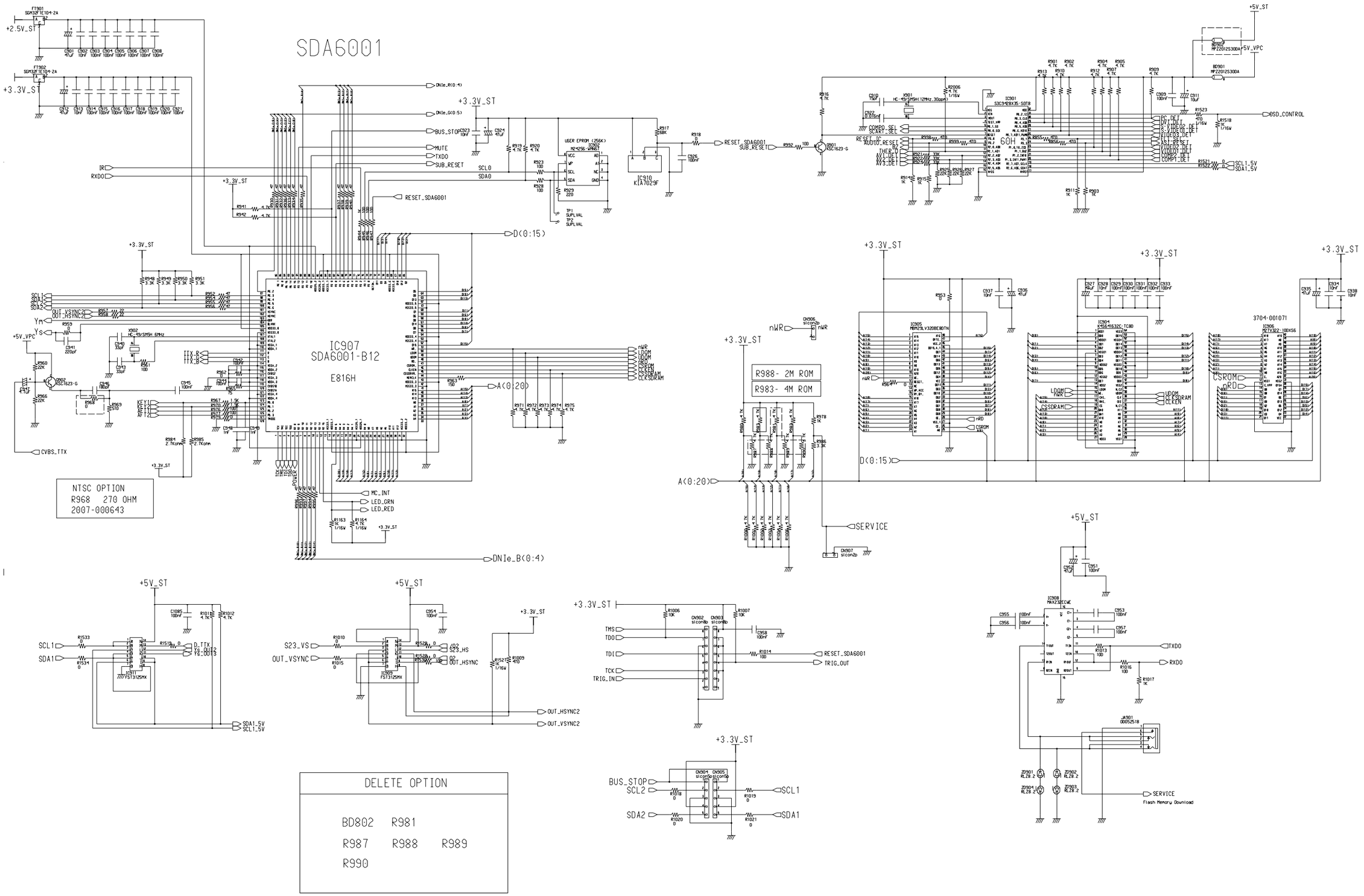

5-11 DNIe2(Digital PCB)

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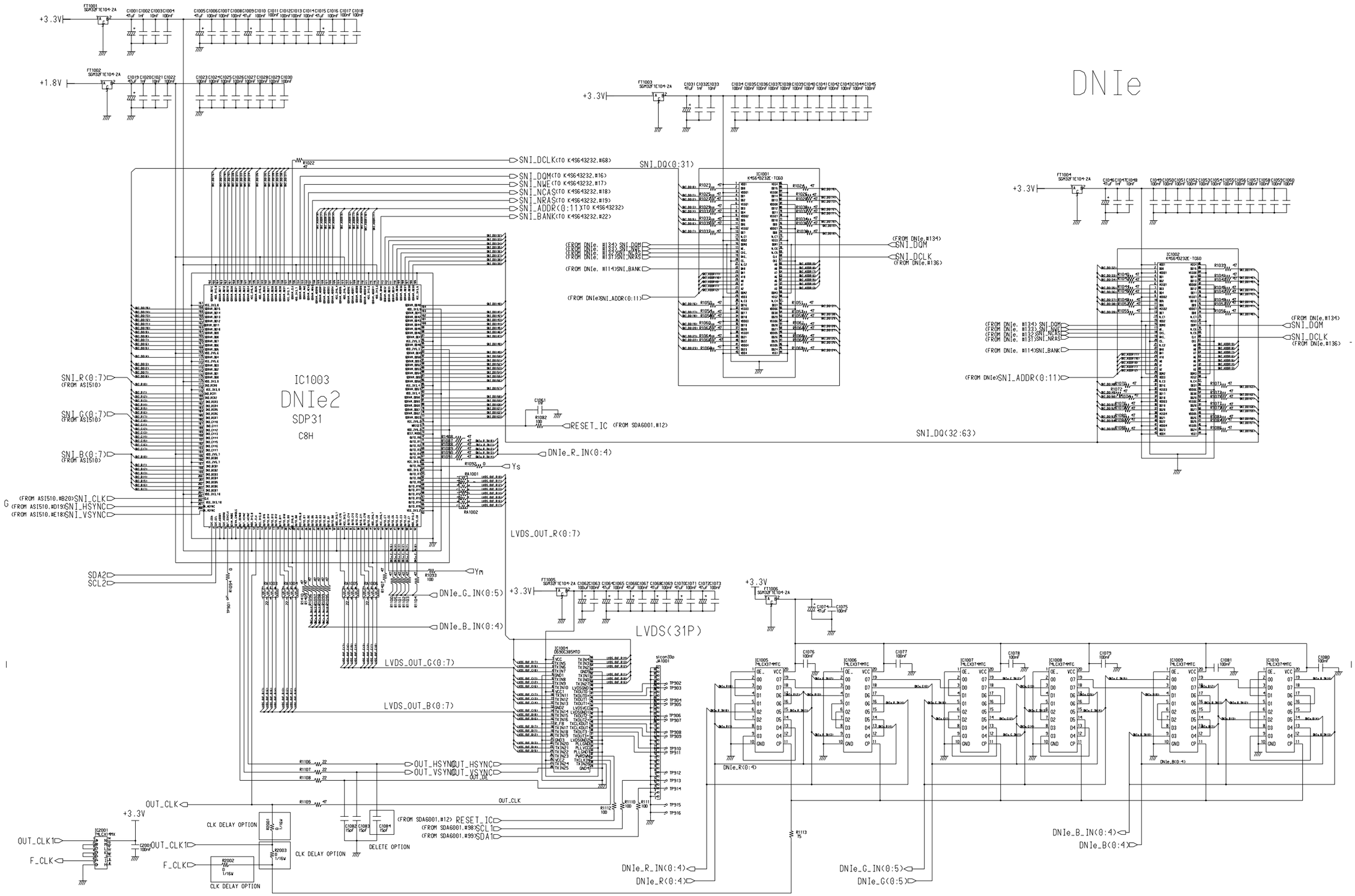

5-12 AUDIO(Digital PCB)

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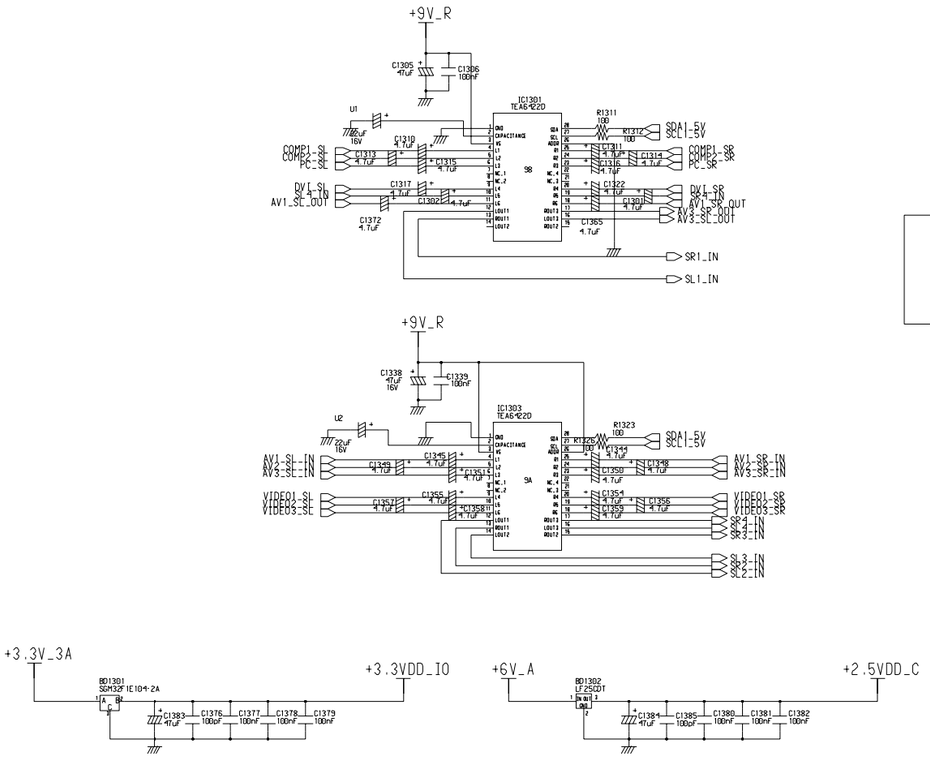

5-13 TUNER

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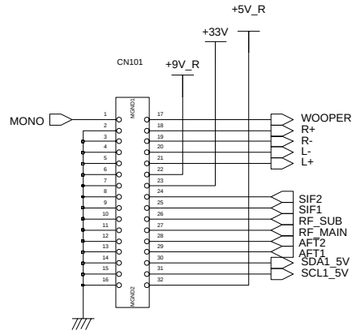

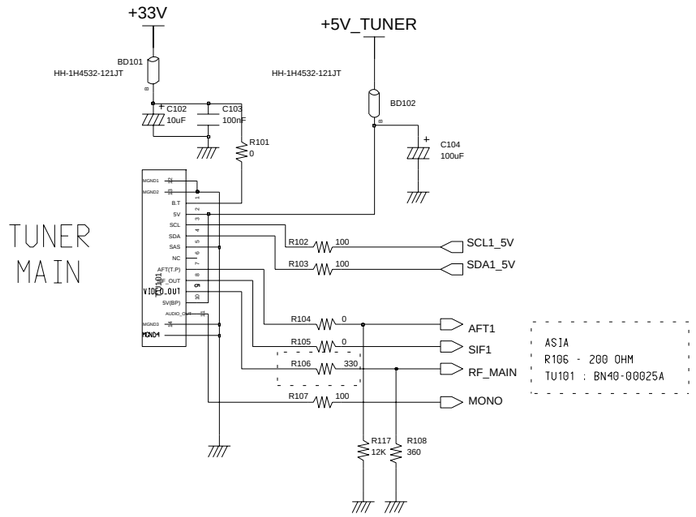

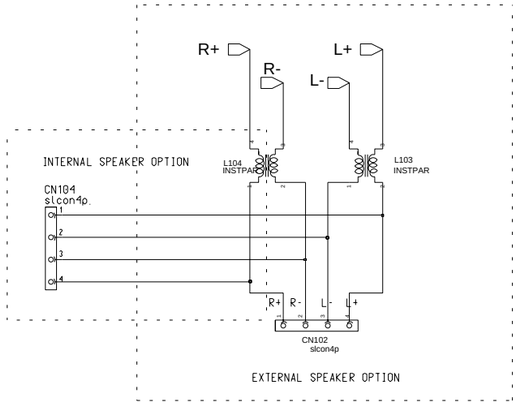

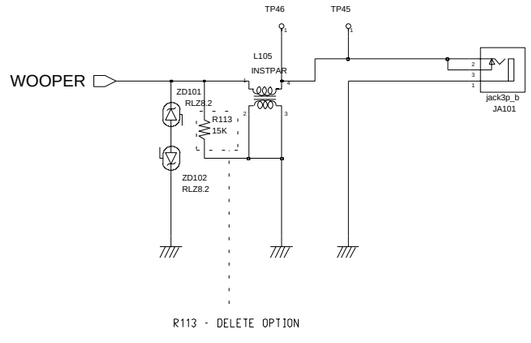

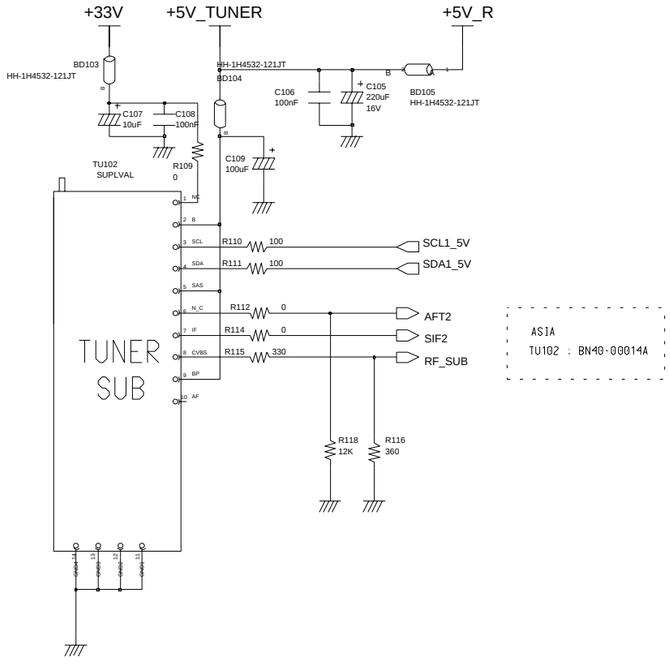

5-14 SIDE A/V

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